

# EUROPEAN PATENT OFFICE

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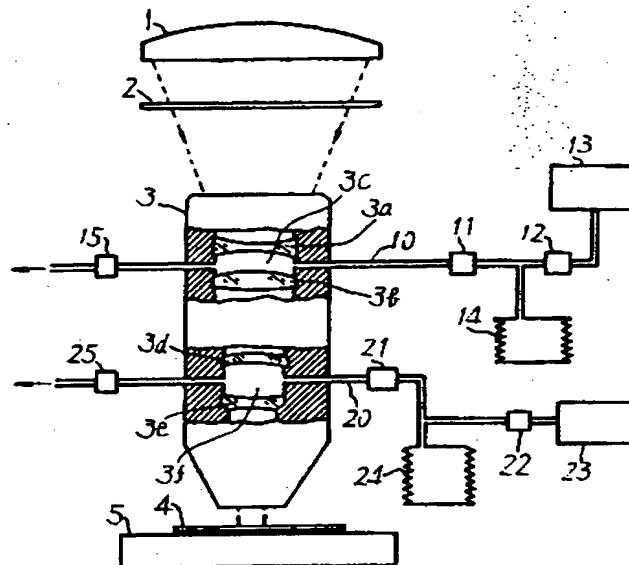
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TITLE : PROJECTIVE OPTICAL DEVICE



**ABSTRACT :** PURPOSE: To enable the correction of variation of the optical characteristics due to variation of temperature and atmospheric pressure by forming a hermetic space in the middle of an optical path from a mask to a projective substrate and supplying a gas which can change as refractive index into the space.

**CONSTITUTION:** The selected gas is supplied from supply sources 13 and 23 into gas reservoirs 14 and 24. At this time, intervals 3c and 3f are filled with the gas and the air which has filled those intervals 3c and 3f is substituted for the gas. When the substituting operation is carried out sufficiently, the intervals 3c and 3f are insulated from the outside. At this time, capacities of the gas reservoirs 14 and 24 enhance so as to equal the internal pressures to the atmospheric pressure. As a result, pressure of the gas inside the intervals 3c and 3f also becomes equal to the atmospheric pressure. After that, the gas pressure inside the gas reservoirs 14 and 24 are modulated so as to be equal to the atmospheric pressure by expansion or contraction of the reservoirs and the variation of magnification or focus is corrected by the dependence on pressure of a refractive index of the gas by itself.

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